

Customer No.: 31561
Application No.: 10/604,392
Docket No.: 10606-US-PA

REMARKS

Present Status of the Application

The specification is objected to because a trademark failing of the proprietary nature is used in the application. The Office Action rejected claims 1-11. Specifically, the Office Action rejected claim 9 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action rejected claims 1, 5, 10 and 11 under 35 U.S.C. 102(b), as being anticipated by Arami et al. (U.S. 5,958,140). The Office Action rejected claims 1, 5, 10 and 11 under 35 U.S.C. 102(e), as being anticipated by Yagi et al. (U.S. 6,473,993). The Office Action also rejected claims 2-4 and 6-8 under 35 U.S.C. 103(a) as being unpatentable over Yagi in view of Gill (U.S. 6,314,991) and Roithner et al. (US 6,294,026).

Applicants have amended the specification to overcome the objection and amended claims 1, 5 and 9 to overcome the rejection. Applicants have also newly added claims 17-19. The limitations added in claim 1 are as shown in Fig. 3, the limitations of claims 17-19 are described at paragraphs [0025] and [0027], and no new matter is entered. After entry of the foregoing amendments, claims 1-11, 17-19 remain pending in the present application, and reconsideration of those claims is respectfully requested.

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Discussion of Office Action Objections and Rejections

The specification is objected to because a trademark lacking for the proprietary nature is used in the application. In addition, claim 9 is rejected under 35 U.S.C 112, second paragraph, because a trademark or trade name is used in the claim. Applicants amended "Teflon" to "polytetrafluoroethylene" in the specification and claim 9 to overcome the objection and rejection.

Applicants respectfully traverse the 102(b) rejection of claims 1, 5, 10 and 11 because Arami et al. (U.S. 5,958,140) does not teach every element recited in these claims.

In order to properly anticipate Applicants' claimed invention under 35 U.S.C 102, each and every element of claim in issue must be found, "either expressly or inherently described, in a single prior art reference". "The identical invention must be shown in as complete details as is contained in the claim. Richardson v. Suzuki Motor Co., 868 F. 2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)." See M.P.E.P. 2131, 8th ed., 2001.

The present invention is in general related a gas distributing system as claim 1 recites:

Claim 1. A gas distributing system for delivering gaseous reactant to a reaction chamber during a wafer fabrication process, comprising:

a main gas distributing conduit branching out to a first gas distributing conduit and a second gas distributing conduit;

a first flow control valve along the first gas distributing conduit for controlling the gas flow rate inside the first gas distributing conduit;

a second flow control valve along the second gas distributing conduit for controlling the gas flow rate inside the second gas distributing conduit;

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a top plate having a plurality of first gas nozzles communicating with the first gas distributing conduit, a plurality of second gas nozzles communicating with the second gas distributing conduit and around the first gas nozzles, and a gas barrier disposed in the top plate between the first gas nozzle and the second gas nozzle for preventing the mixing of gas from the first gas nozzle and the second gas nozzle; and

an upper electrode panel gas distributor having a first set of gas holes and a second set of gas holes thereon, wherein gas from the first gas nozzle passes into the reaction chamber through the first set of gas holes and gas from the second gas nozzle passes into the reaction chamber through the second set of gas holes.

Arami fails to teach or suggest the feature of that a top plate having a plurality of first gas nozzles communicating with the first gas distributing conduit, a plurality of second gas nozzles communicating with the second gas distributing conduit and around the first gas nozzles. Arami discloses a heat processing apparatus. The apparatus includes a shower head section 35 divided by wells 36A, 36B to form three gas chambers 37A, 37B, 37C, as shown in Fig. 5. The gases from the pipes 38, 39, 40 are flowed into the three gas chambers 37A, 37B, 37C. Then, the gases inject to the processing chamber through the injection holes 48 formed in the lower portion of the shower head section 35. In other words, the gases are flowed into the three gas chambers 37A, 37B, 37C from the pipes 38, 39, 40. Arami fails to teach or suggest that *a plurality of first gas nozzles* communicating with the first gas distributing conduit and *a plurality of second gas nozzles* communicating with the second gas distributing conduit and *around the first gas nozzle* as claim 1 recited. Because the gas distributing system of claim 1 of the present invention includes the top plate having a plurality of first gas nozzles and a plurality of second gas nozzles, the gases from the first gas distributing conduit and the second gas distributing conduit inject

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toward the upper electrode panel gas distributor through the first gas nozzles and the second gas nozzles respectively.

Therefore, Arami does not teach every element recited in claim 1. For at least the foregoing reasons, Applicant respectfully submits that independent claim 1 patentably defines over the prior art reference, and should be allowed. For at least the same reasons, dependent claims 5, 10 and 11 patentably define over the prior art as well.

Applicants respectfully traverse the 102(e) rejection of claims 1, 5, 10 and 11 because Yagi et al. (U.S. 6,473,993) does not teach every element recited in these claims.

Yagi also fails to teach or suggest the feature of that a top plate having a plurality of first gas nozzles communicating with the first gas distributing conduit, a plurality of second gas nozzles communicating with the second gas distributing conduit and around the first gas nozzles. Yagi teaches a thermal treatment apparatus as shown in Fig. 1. The apparatus includes a gas supply unit 4 divided into a first gas chamber 51 and a second annular gas chamber 52. A gas supply plate 41 having gas supply holes 42 is at the bottom of the first gas chamber 51 and the second annular gas chamber 52. Hence, the gases from the pipes 45, 46 are flowed into the gas chambers 51, 52. Then, the gases inject into the processing chamber 2 through the gas supply holes 42. In other words, the gases are flowed into the gas chambers 51, 52 from the pipes 45, 46. Yagi fails to teach or suggest that *a plurality of first gas nozzles* communicating with the first

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gas distributing conduit and *a plurality of second gas nozzles* communicating with the second gas distributing conduit and *around the first gas nozzle* as claim 1 recited.

Therefore, Yagi does not teach every element recited in claim 1. For at least the foregoing reasons, Applicant respectfully submits that independent claim 1 patentably defines over the prior art reference, and should be allowed. For at least the same reasons, dependent claims 5, 10 and 11 patentably define over the prior art as well.

Applicants respectfully traverse the rejection of claims 2-4 and 6-8 under 103(a) as being unpatentable over Yagi in view of Gill (U.S. 6,314,991) and Roithner et al. (US 6,294,026) because a prima facie case of obviousness has not been established by the Office Action.

To establish a prima facie case of obviousness under 35 U.S.C. 103(a), each of three requirements must be met. First, the reference or references, taken alone or combined, must teach or suggest each and every element in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of the three requirements must "be found in the prior art, and not be based on applicant's disclosure." See M.P.E.P. 2143, 8th ed., February 2003.

Applicants submit that, as disclosed above, Yagi fails to teach or suggest each and every element of claim 1 from which claims 2-4 and 6-8 depend. Gill and Roithner also fail to teach

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the feature of that a top plate having a plurality of first gas nozzles communicating with the first gas distributing conduit, a plurality of second gas nozzles communicating with the second gas distributing conduit and around first gas nozzles, and thus Gill and Roithner cannot cure the deficiencies of Yagi. Therefore, independent claim 1 is patentable over Yagi, Gill and Roithner. For at the least the same reasons, their dependent claims 2-4 and 6-8 are also be patentable as a matter of law.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

Belinda Lee
Belinda Lee

Registration No.: 46,863

Jiang Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jciigroup.com.tw
Usa@jciigroup.com.tw